

## ITERATIVE MULTI-USER DETECTION

### Abstract

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Methods and mechanisms for reducing the impact of cross talk interference in multi-carrier data transmission systems are disclosed. In one aspect, the invention relates to a method of canceling cross talk interference in a received data signal. The method includes receiving an input signal that includes a primary data signal and a superimposed cross-talk signal. An estimation of the primary data signal and an estimation of the superimposed cross talk signal are iteratively computed. The probable estimation of the primary data signal is based at least in part upon the iteratively computed probable estimation of the cross talk signal and the probable estimation of the superimposed cross talk signal is based at least in part upon the iteratively computed probable estimation of the primary data signal.

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